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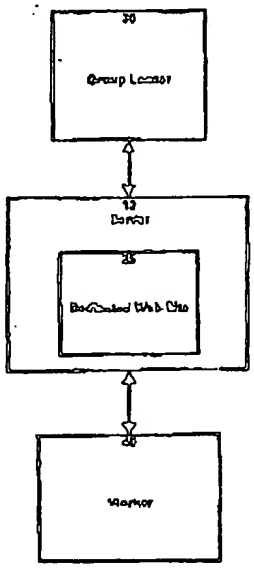
(30) 1997/10/22 (08/955,569) US

(54) SYSTEME ET METHODE DE PRESTATION DE FONCTIONNALITE DE LOGICIEL DE GROUPE FONDES SUR INTERNET

(54) SYSTEM AND METHOD FOR PROVIDING INTERNET-BASED GROUPWARE APPLICATION FUNCTIONALITY



(57) La présente invention porte sur un système de fourniture de bureau virtuel, ce système comportant (i) un serveur connecté à Internet et doté de capacités d'entrée et d'accès, (ii) un moyen permettant que le serveur reçoive des instructions d'un premier site éloigné et de créer un site Web réservé doté d'une adresse unique basée sur les instructions reçues, (iii) un moyen permettant de communiquer l'adresse unique du site Web réservé à un deuxième site éloigné désigné, (iv) un moyen permettant au deuxième site éloigné d'accéder au contenu du premier site au moyen d'un navigateur Web installé au deuxième site éloigné et (v) des moyens pour stocker l'information à l'entrée du site Web réservé par l'intermédiaire d'un navigateur Web installé au premier ou au deuxième site éloigné. Une méthode d'utilisation de ce système est aussi fournie.

(57) The present invention provides a system for providing a virtual office, the system comprising: (i) an Internet-connected server having input and access capabilities, (ii) a means on the server for receiving instructions input from a first remote site and for creating a dedicated internet web-site having a unique address based on the received instructions; (iii) means to communicate the unique address of the dedicated web-site to a nominated second remote site; (iv) means to access contents of the dedicated web-site by the second remote site via a web-browser installed at the second remote site; and (v) means to store information in the dedicated web-site input via a web-browser installed at the first or the second remote site. A method of using the system is also provided.

ABSTRACT OF THE DISCLOSURE

The present invention provides a system for providing a virtual office, the system comprising: (i) an internet-connected server having input and access capabilities; (ii) a means on the server for receiving instructions input from a first remote site and for creating a dedicated internet web-site having a unique address based on the received instructions; (iii) means to communicate the unique address of the dedicated web-site to a nominated second remote site; (iv) means to access contents of the dedicated web-site by the second remote site via a web-browser installed at the second remote site; and (v) means to store information in the dedicated web-site input via a web-browser installed at the first or the second remote site. A method of using the system is also provided.

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to the field of collaborative software systems. More specifically, the invention relates to a system and method for providing internet-base groupware application functionality.

DESCRIPTION OF THE PRIOR ART

Recently, the need for collaborative computing environments has been receiving increasing attention. People are finding that it is more and more important to share information and work together to meet common goals. With increasing specialization in the marketplace, there is frequent need to work together with people from different offices, different organizations and even different countries to satisfy the requirements of a particular project or goal. Managing collaborative initiatives of this type is not a simple matter.

Electronic network based, project management server systems are known. For example, United States patent number 5,548,506 [Srinivasan] discloses an automated, electronic network based, project management server system for managing multiple work groups. The system comprises a core piece of software which runs on a host server computer system and interacts with a messaging system such as e.mail or facsimile. The system compiles multi-project plans into a multi-project database and tracks the ownership of projects, tasks and resources within the plans. The system automatically checks all resource requests and if resource availability limits are exceeded then resources are allocated on projects based on priorities and project plans are changed accordingly. The system is also programmed to send out reminders and follow-ups and the databases are continuously updated based on status changes reported by work group members. Srinivasan teaches that the communication network may be facsimile, local area network (LAN), wide area network (WAN) or telephone network.

One of the disadvantages of known electronic network-based, collaborative server systems is that the user must install all the communication lines, server technology and support software and have expertise necessary to implement the system. The installation and maintenance of such a system is time-consuming and costly.

It is an object of the present invention to obviate and mitigate at least one of the disadvantages of the prior art.

SUMMARY OF THE INVENTION

Accordingly, in one of its aspects, the present invention provides a system for providing a virtual office, the system comprising:

(i) an internet-connected server having input and access capabilities;

(ii) a means on the server for receiving instructions input from a first remote site and for creating a dedicated internet web-site having a unique address based on the received instructions;

(iii) means to communicate the unique address of the dedicated web-site to a nominated second remote site;

(iv) means to access contents of the dedicated web-site by the second remote site via a web-browser installed at the second remote site; and

(v) means to store information in the dedicated web-site input via a web-browser installed at the first or the second remote site.

In another aspect the present invention provides a system to provide a team of users with internet-based groupware application functionality, comprising:

(i) an internet-connected server having a means to receive an initiate instruction from a remote primary user;

(ii) a means to create a dedicated web-site on the server in response to the initiate instruction;

(iii) means to send information including the address of the dedicated web-site to at least one secondary user nominated by the primary user;

(iv) means to receive information at the dedicated web-site sent by the at least one secondary user over the internet;

(v) means to store information at the dedicated web-site at the request of the primary and the at least one secondary user;

(vi) means to permit processing of the information stored at the dedicated web-site by the primary and the at least one secondary user; and

(vii) means to access stored and processed information to the primary user and the at least one secondary user for display.

In yet another aspect, the present invention provides a method for providing a virtual office, comprising:

(i) providing an internet-connected server having input and access capabilities;

(ii) receiving instructions input from a first remote site and for creating a dedicated internet web-site on the server, the dedicated web-site having a unique address based on the received instructions;

(iii) communicating the unique address of the dedicated web-site to a nominated second remote site;

(iv) downloading contents of the dedicated web-site to the second remote site via a web-browser installed at the second remote site; and

(v) storing information in the dedicated web-site uploaded via a web-browser installed at the first or the second remote site.

BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the present invention will be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is schematic representation of a system in accordance with one embodiment of the present invention;

Figure 2 is an flowchart outlining the operation of the system; and

Figures 3a-3g are reproductions of web-pages from a web-site created in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A system to provide a team of users with internet-based groupware application functionality in accordance with the present invention is shown schematically in Figure 1.

The system generally comprises an internet connected server 10 which has input and access capabilities via two-way communication lines, such as communication lines 15,20. Server 10 comprises a means to create a dedicated web-site 25 on the server in response from an initiate request from a first remote user 30. Dedicated web-site 30 has a unique internet address. Server 10 further comprises a means to send information, including the unique address of the dedicated web-site, to at least one secondary user 40, nominated by the primary user 30.

For ease of understanding, "primary user 30" will hereinafter be referred to as "Group Leader" and "at least one secondary user 40" will hereinafter be referred to as "Worker 1". Other secondary users will be referred to as "Worker 2", "Worker 3" etc.

Both Group Leader and Worker 1 can communicate with server 10 by means of a standard internet browser, such as Netscape Navigator™ or Microsoft Explorer™, i.e., there is no requirement that either Group Leader or Worker have access to specialized software applications in order to utilize the system of the present invention.

Once connected to dedicated web-site 25 created on server 10, Group Leader and Worker both have access to at least some of the information stored at the web-site, the ability to access and process at least some of the information and the ability to input and store processed and/or new information. All the specialized software which provides the functional requirements to give Group Leader and Worker these abilities is provided by server 10 via dedicated web-site 25. Once again, Group Leader and Worker do not require any specialized software applications other than a standard internet browser.

It will be apparent that, as the system of the present invention is internet-based, the nature of communication lines, such as line 15 between server 10 and Group Leader, is not particularly limited. Suitable internet-adaptable communication lines include public telephone networks, private telephone networks, satellite links, ethernet links, etc. These communication lines are already in place if Group Leader and Worker have existing internet access. As stated above, server 10 is internet-connected. As will also be apparent, the geographic locations of Group Leader, Worker and server

10 are only limited by internet accessibility, i.e., all three need not be in the same city, county or even continent.

The web-site created in response to the initiate request can be thought of as being a virtual private office suite. The virtual office suite is effectively rentable from the server on which it is created for a period of time desired by the rentor, after which time the office suite ceases to exist. The office comes complete with all the application software required to permit group activity within the virtual office. The operator of the server can construct a particular virtual private office suite to include the specific applications requested by the user. Thus, an advantage of the present system is that the user is provided with a customized, secure office site in which the user and his/her team can access applications software without the need for each team member to have individual copies of each applications software. The system of the present invention is "end-user friendly", i.e., neither Group Leader or Worker need specialist computer knowledge to make use of the system. There is no requirement for the user to have an in-house Information Technology specialist.

The system of the present invention is further understood when described by its mode of operation and with reference to Figure 2.

In order to create a virtual office suite, a Group Leader contacts the home page of a remote internet connected server (110) and the server determines whether the Group Leader is an existing system user (120). If the Group Leader is not an existing user, the server enters an administration subsystem 130 which registers (140) the user.

Administration subsystem 130 controls all the day to day management of subscriber accounts on the system. It contains all the code and script required to automate billing, for invoice generation, for workgroup size monitoring and database size monitoring. Further, the administration subsystem is responsible for monitoring server traffic and hit counts and the control of the offering of additional subscriber applications.

If the Group Leader is an existing user, the server determines whether the Group Leader wishes to enter an existing workgroup with a pre-defined web-site or whether the Group Leader wishes to create a new workgroup with a new, unique web-site (150).

If the Group Leader wishes to enter an existing workgroup the server permits access to the pre-defined web-site (160). As will be apparent, the Group Leader could enter the pre-defined web-site directly from his/her web browser. It is not necessary to enter the server home page before entering a workgroup once a dedicated web-site has been set up.

If the Group Leader wishes to create a new workgroup, he/she is provided with a workgroup creation template form (170) which permits the Group Leader to define parameters (e.g., the scope of the projection being undertaken) of the workgroup, such as the name of the workgroup and the web-site to be created.

Once this form has been completed, the server creates a dedicated web-site (180) having the name chosen by Group Leader and the Group Leader is prompted to identify the number and contact addresses of the group members and the types of user applications which are to be utilized during the project. The server then sends details of the newly created dedicated web-site to the members of the group (Workers) nominated by the Group Leader (190). The details of the web-site are generally sent in the form of an E-mail message which provides each Worker with the address of the web-site, an invitation to join the workgroup and, if applicable, the password required for gaining access to the site (see later). In an alternative system, it is envisioned that Workers may be notified of the details of the Web-site by facsimile or by pager.

Once the Workers have been notified of the existence of the web-site, the workgroup remains operational until all workgroup activities have been completed (200). When the Group Leader decides that there is no longer a requirement for the workgroup, the workgroup is closed (210) and the dedicated web-site is deleted from the server (220). Prior to closure and deletion of the web-site, Group Leader is given the option of downloading and storing all the data from the site for archive purposes.

During the creation of a web-site, Worker nomination, workgroup activity and eventual closure of the workgroup and deletion of the web-site, all the administrative details of the workgroup activity are automatically fed into the administrative subsystem for processing

Security is an important feature of most of business activity and the system of the present invention provides many levels of security which can be selected by the

Group Leader to suit his/her individual needs. For example, a basic form of security is to provide the dedicated web-site created with a password must be entered by both the Group Leader and the Workers to gain access to the workgroup. This password may be the same for the Group Leader and all the Workers, or every Worker may be provided with a unique password. Providing each Worker with a unique password also permits Group Leader to set up different levels of information which can be accessed within the workgroup by each Worker, i.e., the workgroup can be created on a "need to know" basis. Examples of other security features include the ability of the Group Leader to decide: who has the authority to add new Workers to and/or delete existing Workers from the group after its creation; who has access to the administrative records of the workgroup; and when and if passwords and/or security levels are to be changed.

As will be apparent, there are many different types of workgroup activities which can be performed on a system in accordance with the present invention. In fact, it is envisioned that the present system could be adapted to perform many of the tasks of conventional LAN- or WAN-based group collaboration systems. Preferred workgroup activity applications of the present system include project collaboration, discussion, issue management, change control and software management.

A project collaboration application provides the Group Leader and Workers with a complete environment in which to collaborate on a particular project. The Group Leader can assign tasks with due dates and effort expectations. Workers receive E-mail notifying them of the workgroup's web-site address as well as their user name and password. Workers see only those tasks assigned to them (in a "need to know" set up) and they may give feedback as to progress, expected completion date as well as time spent on their tasks. The project collaboration application provides all the discussion and document attachment facilities to support the entire collaboration process.

A discussion application allows the Group Leader and Workers to communicate and share ideas in a secure central location. Central discussions are much more efficient than E-mail. Rather than all discussion information existing in personal E-mail in-box, available only to the individual, the data resides in a central knowledge base for all to benefit from. User authentication helps ensure that only the original

author of a document or discussion item may edit or delete it. A variety of information displays are available and include, for example, showing date in date order, by author or by category. Full text searching of the data is also an option.

An issue management application is a collaborative group application designed to manage the raising and resolution of issues. In workgroups it is preferable that every Worker of the group of Workers has the ability to raise, track, assign and evaluate the impact of issues. Efficient tracking and resolution within the team ensures faster and better results. This application allows the Group Leader and/or Workers to compose an issue which automatically notifies the other Workers by E-mail. The Group Leader can then assign the issue to one of the Workers in the group and follow the status through to resolution.

A change control application provides a process for identifying, estimating and approving changes to a project plan and provides a clear framework for management of project scope.

A software management application is a specialist application aimed at software and information technology departments. The software management application permits such organisations to provide customers with a secure, completely interactive web-site for managing their software products or internal applications. Customers and users can log feature requests and bugs, download current software versions, ask questions and probe a knowledge base easily, using only a standard web-browser.

An example of the use of the system of the present invention is shown in Figures 3a-3g. The Figures provided a step-by-step look at how a Group Leader (hereinafter referred to as Terri) created a dedicated, secure "virtual office" for a project team, utilizing a project collaboration application.

Terri first contacts the server, clicks on a Create Workgroup Icon and fills out a registration form, indicating the name she wishes to use for the dedicated web-site ("www.involv.net/territeam.nsf"). Within a matter of seconds, the web-site is created and Terri is linked to her team's new, secure collaborative project site. Terri is immediately challenged for her user name and password (Figure 3a). When user name and password have been verified, Terri is allowed to access her group's home page (Figure 3b). Terri's web-page is provided with a "Toolbar" to facilitate operation, a

"Navigator" to facilitate organisation and a "Workspace" permitting information to be input and accessed by Terri and the other group members (Figure 3c).

One of Terri's first tasks is to enter details of all the team members in the "Member Profile". Each team member is automatically sent an e.mail invitation to join the group (Figure 3d).

Once details of all the team members have been entered, Terri can start to create projects (Figure 3e) and assign tasks within each project to individual members of the team (Figure 3f). The Navigator allows easy tracking of group activities and allows details to be displayed in a variety of formats (Figure 3g).

Once all projects have been completed, Terri can permanently close the workgroup and delete the "territeam" web-site form the server.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A system for providing a virtual office, comprising:

(i) an internet-connected server having input and access capabilities;

(ii) a means on the server for receiving instructions input from a first remote site and for creating a dedicated internet web-site having a unique address based on the received instructions;

(iii) means to communicate the unique address of the dedicated web-site to a nominated second remote site;

(iv) means to access contents of the dedicated web-site by the second remote site via a web-browser installed at the second remote site; and

(v) means to store information in the dedicated web-site input via a web-browser installed at the first or the second remote site.

2. A system to provide a team of users with internet-based groupware application functionality, comprising:

(i) an internet-connected server having a means to receive an initiate instruction from a remote primary user;

(ii) a means to create a dedicated web-site on the server in response to the initiate instruction;

(iii) means to send information including the address of the dedicated web-site to at least one secondary user nominated by the primary user;

(iv) means to receive information at the dedicated web-site sent by the at least one secondary user over the internet;

(v) means to store information at the dedicated web-site at the request of the primary and the at least one secondary user;

(vi) means to permit processing of the information stored at the dedicated web-site by the primary and the at least one secondary user; and

(vii) means to download stored and processed information to the primary user and the at least one secondary user for display.

3. The system according to claim 1, wherein the primary user sends the initiate instruction via a web-browser.

4. The system according to claim 1, wherein the means to send information comprises e.mail.

5. The system according to claim 1, wherein the means to receive information comprises a web-browser.

6. The system according to claim 1, wherein the means to permit processing of the stored information comprises providing the primary user with a workgroup activity application.

7. The system according to claim 1, wherein the workgroup activity application is selected from the group comprising project collaboration, discussion, issue management, change control and software management.

8. A method for providing a virtual office, comprising:

(i) providing an internet-connected server having upload and download capabilities;

(ii) receiving instructions uploaded from a first remote site and for creating a dedicated internet web-site on the server, the dedicated web-site having a unique address based on the received instructions;

(iii) communicating the unique address of the dedicated web-site to a nominated second remote site;

(iv) downloading contents of the dedicated web-site to the second remote site via a web-browser installed at the second remote site;

(v) storing information in the dedicated web-site uploaded via a web-browser installed at the first or the second remote site.

BNSDOCID: <CA 2221026A1 I >

BNS page

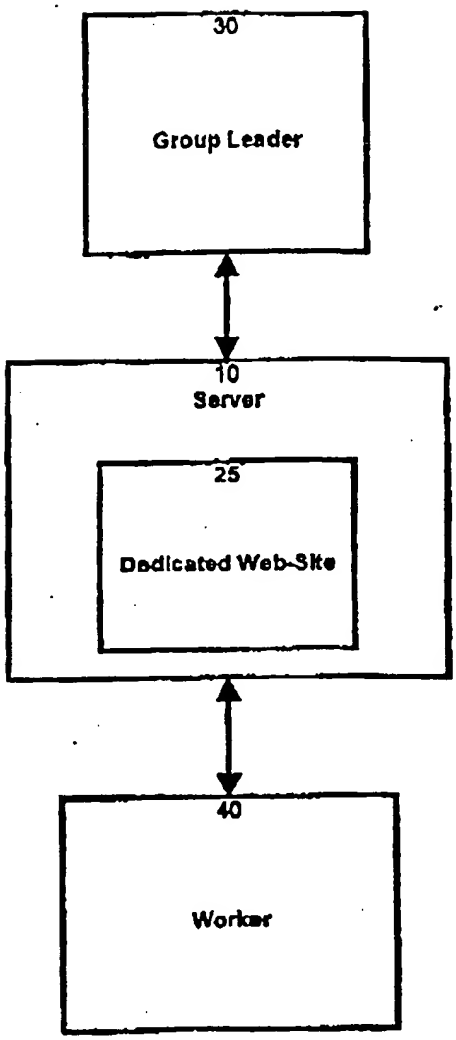


FIGURE 1

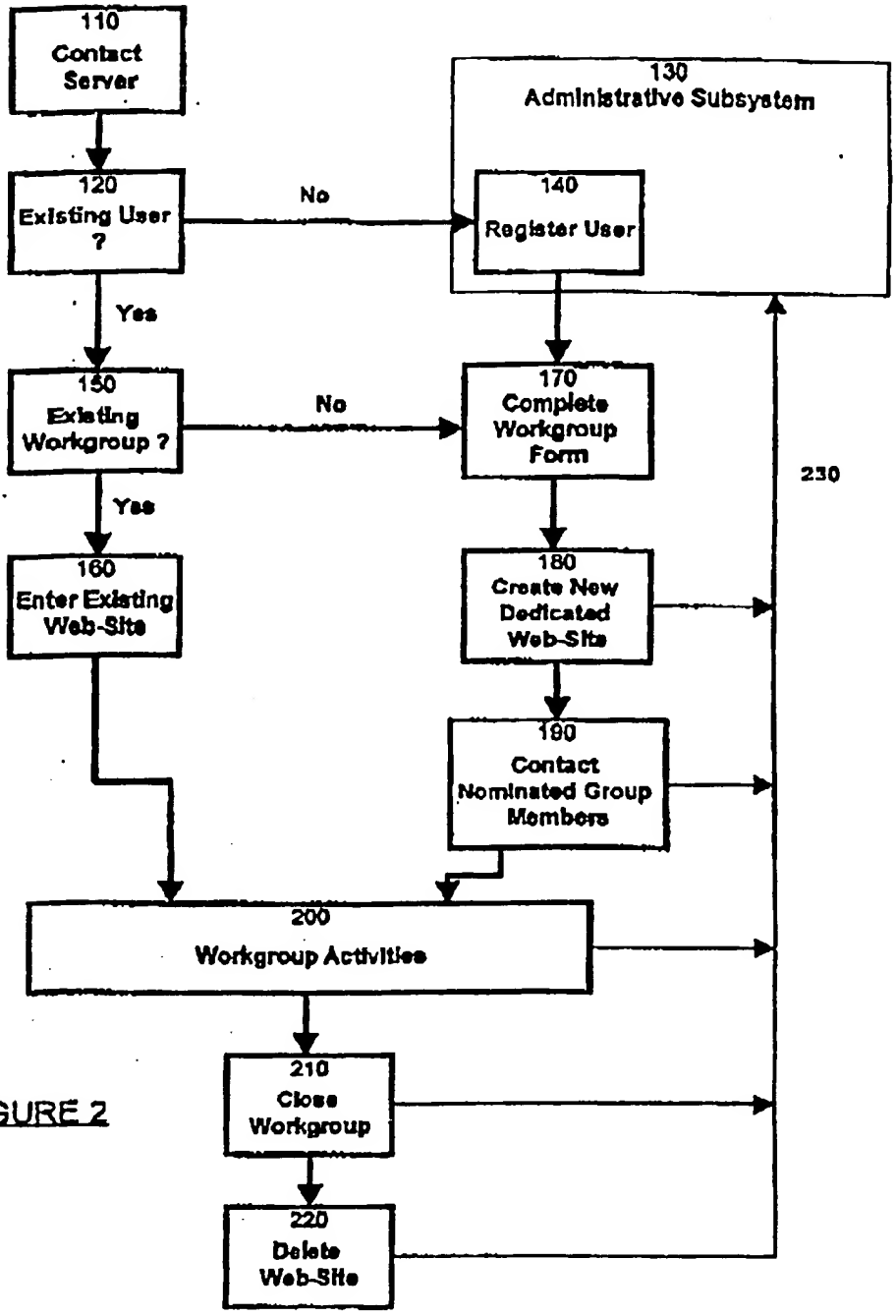

110
Contact Server
120
Existing User ?
No
130
Administrative Subsystem
140
Register User
Yes
150
Existing Workgroup ?
No
170
Complete Workgroup Form
230
Yes
160
Enter Existing Web-Site
180
Create New Dedicated Web-Site
190
Contact Nominated Group Members
200
Workgroup Activities
210
Close Workgroup
220
Delete Web-Site

FIGURE 2

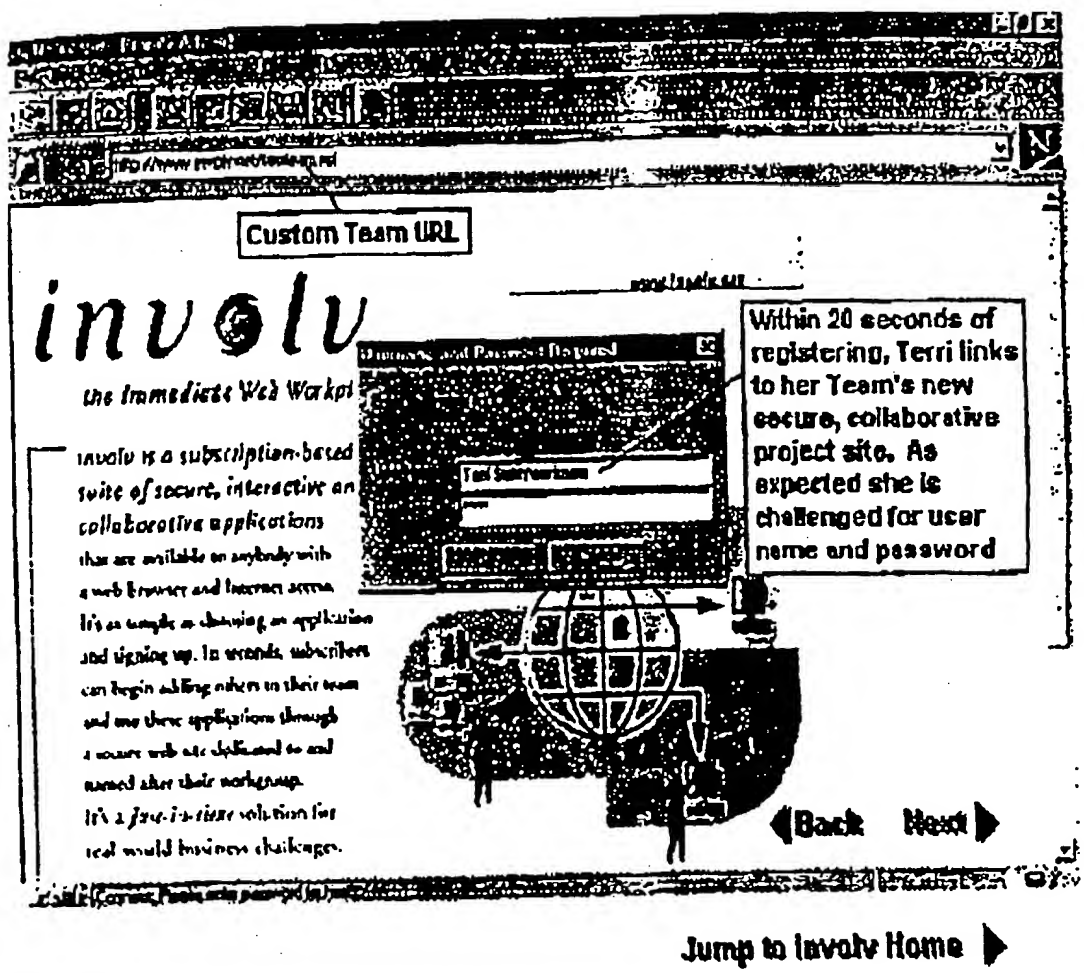

Custom Team URL
involv
the Immediate Web Workpl
involv is a subscription-based suite of secure, interactive an collaborative applications that are available to anybody with a web browser and Internet access. It's as simple as choosing an application and signing up. In seconds, subscribers can begin adding others to their team and use these applications through a secure web site dedicated to and named after their workgroup. It's a just-in-time solution for real world business challenges.
Within 20 seconds of registering, Terri links to her Team's new secure, collaborative project site. As expected she is challenged for user name and password
Back
Next
Jump to Involv Home

FIGURE 3a

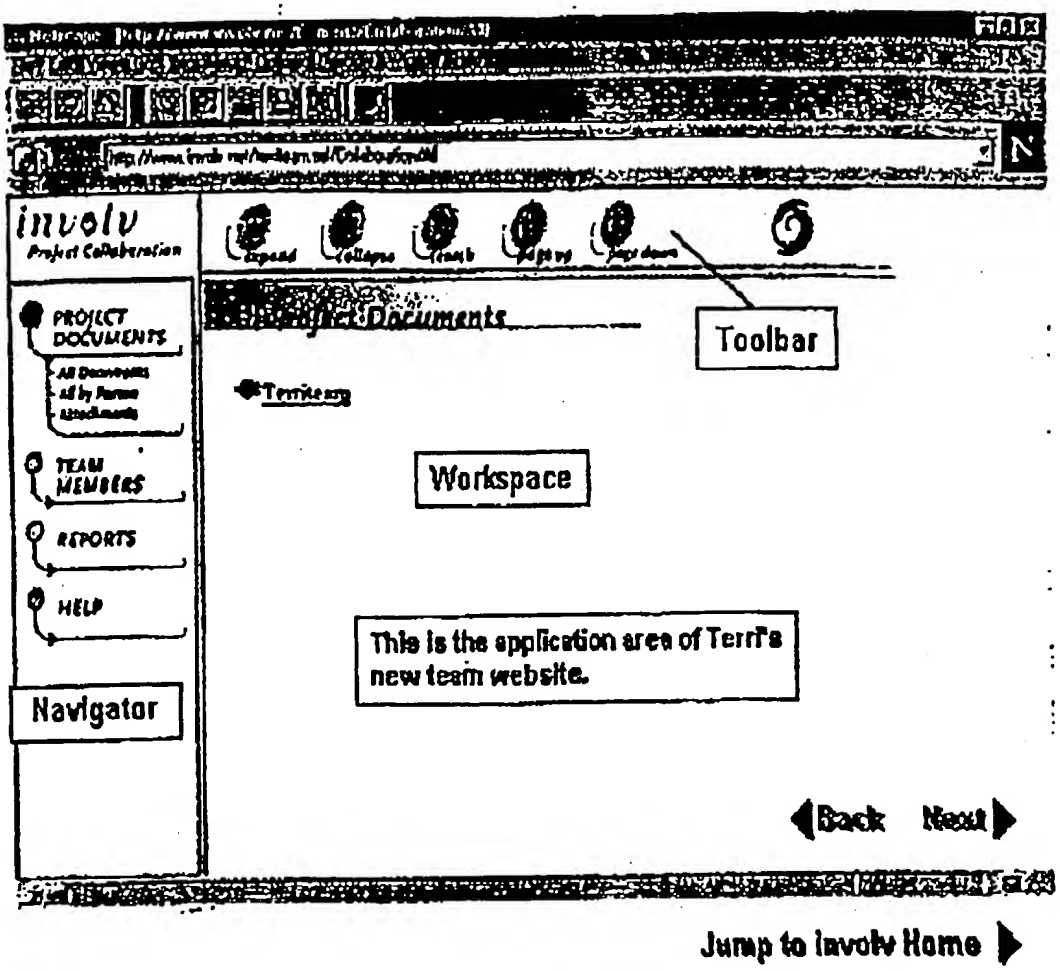

involv
Project Collaboration
PROJECT DOCUMENTS
TEAM MEMBERS
REPORTS
HELP
Navigator
Toolbar
Workspace
This is the application area of Terri's new team website.
Back
Next
Jump to Involv Home

FIGURE 3c

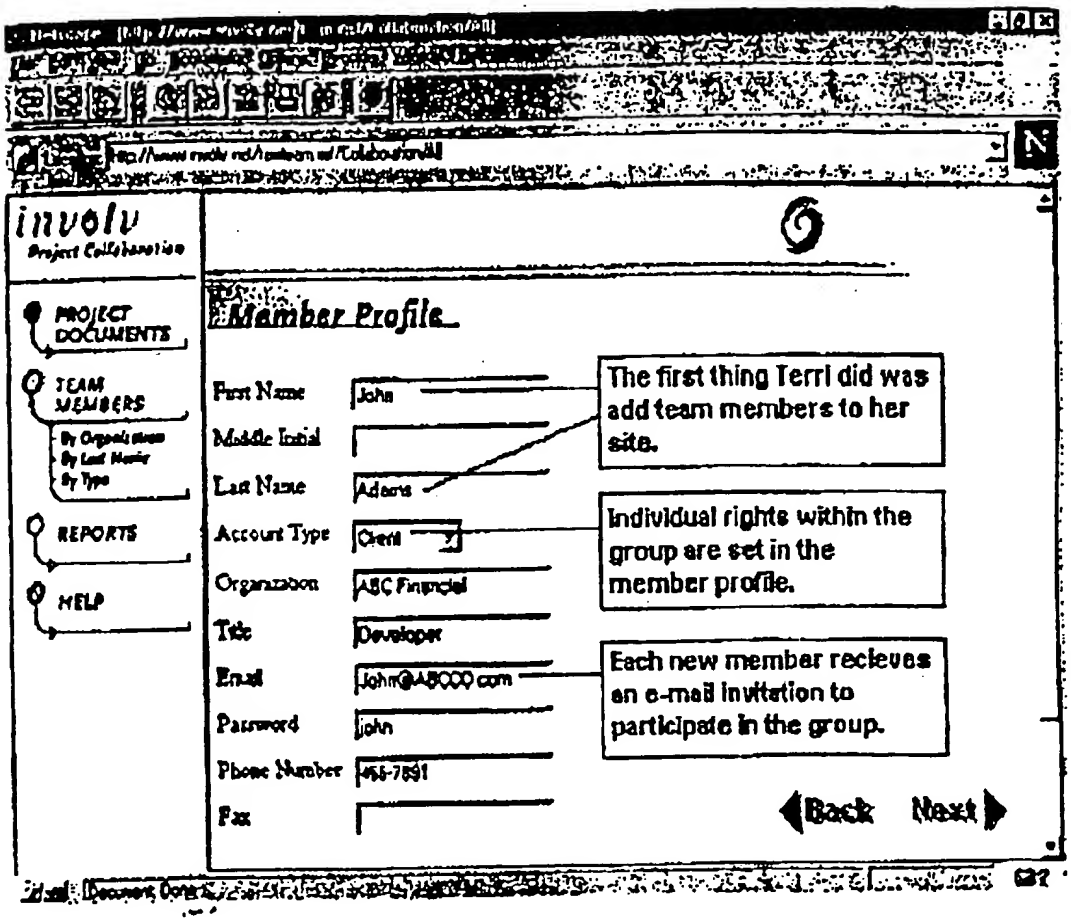

involv
Project Collaboration
PROJECT DOCUMENTS
TEAM MEMBERS
REPORTS
HELP
Member Profile
First Name
John
Middle Initial
Last Name
Adams
Account Type
Client
Organization
ABC Financial
Title
Developer
Email
Password
john
Phone Number
Fax
The first thing Terri did was add team members to her site.
Individual rights within the group are set in the member profile.
Each new member recieves an e-mail invitation to participate in the group.
Back
Next
Jump to Involv Home

FIGURE 3d

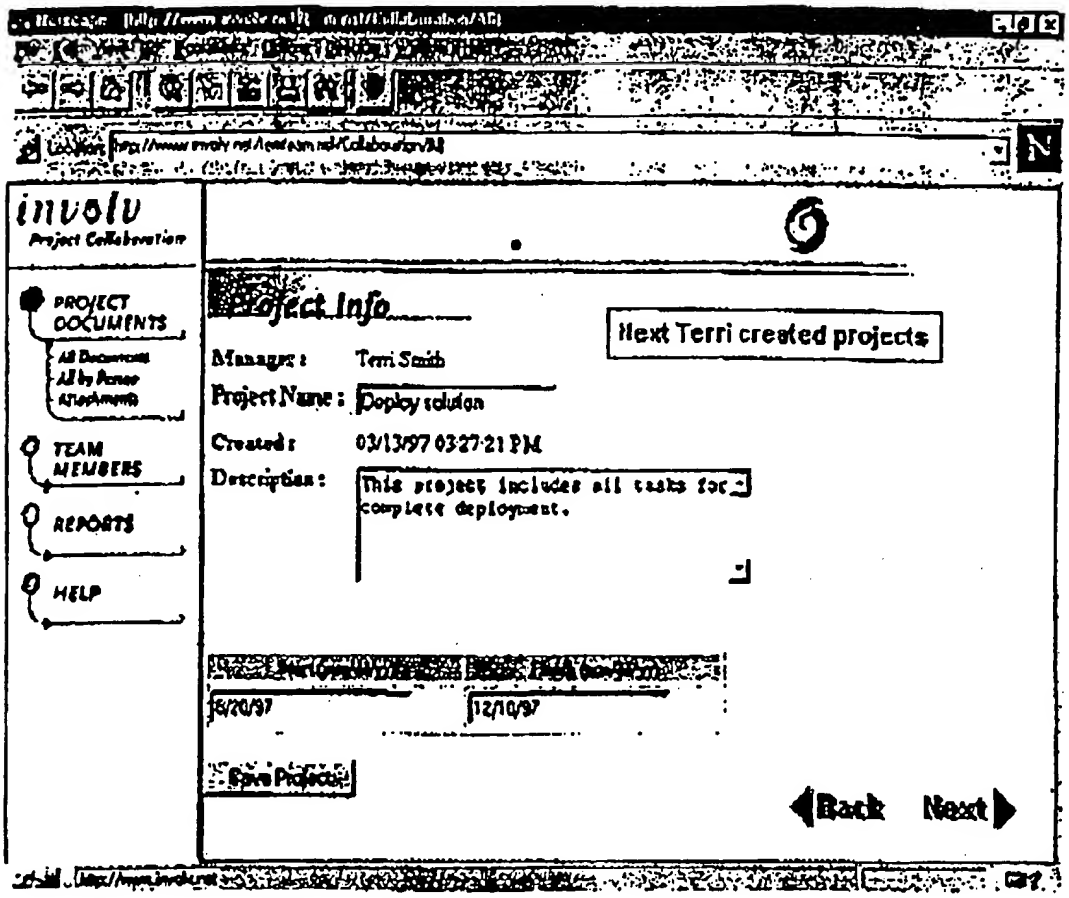

involv
Project Collaboration
PROJECT DOCUMENTS
TEAM MEMBERS
REPORTS
HELP
Project Info
Next Terri created projects
Manager: Terri Smith
Project Name: Deploy solution
Created: 03/13/97 03:27:21 PM
Description:
This project includes all tasks for complete deployment.
12/10/97
Save Project
Back
Next
Jump to Involv Home

FIGURE 3e

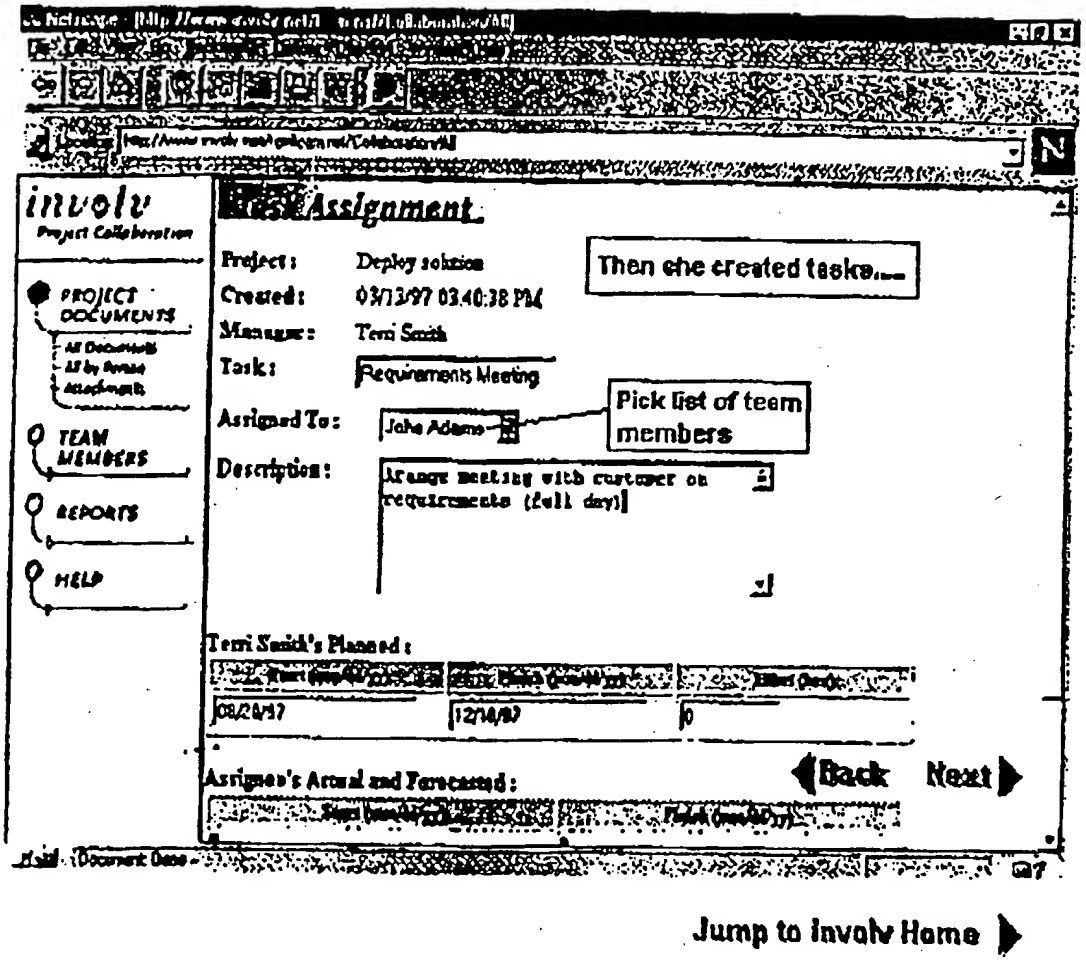

involv
Project Collaboration
PROJECT DOCUMENTS
TEAM MEMBERS
REPORTS
HELP
Assignment
Project: Deploy solution
Created: 03/13/97 03:40:38 PM
Manager: Terri Smith
Task: Requirements Meeting
Assigned To: John Adams
Description: Arrange meeting with customer on requirements (full day)
Then she created tasks...
Pick list of team members
Terri Smith's Planned:
02/26/97
12/14/97
0
Assignee's Actual and Forecasted:
Back
Next
Jump to Involv Home

FIGURE 3f

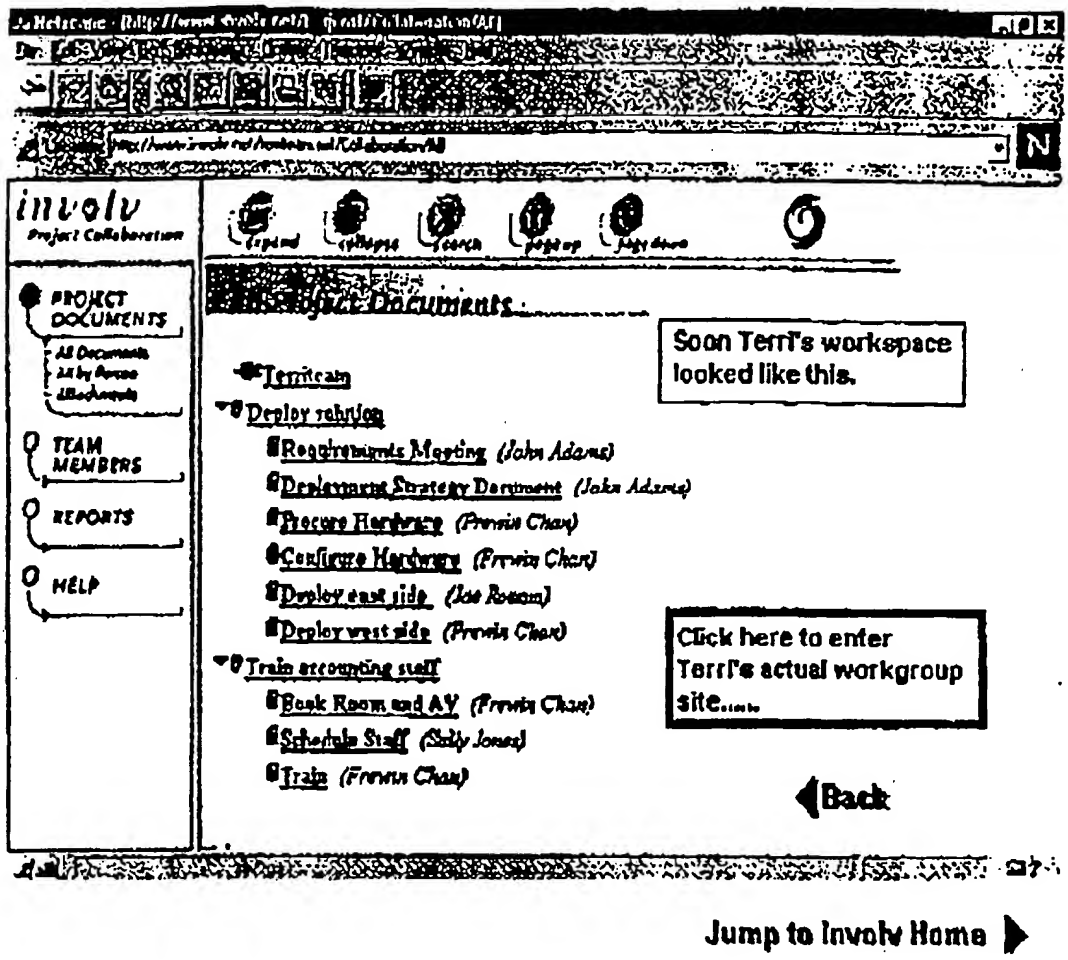

involv
Project Collaboration
PROJECT DOCUMENTS
TEAM MEMBERS
REPORTS
HELP
Soon Terri's workspace looked like this.
Territain
Deploy rehrjog
Requirements Meeting (John Adams)
Deployment Strategy Document (John Adams)
Procure Hardware (Fromin Chan)
Configure Hardware (Fromin Chan)
Deploy east side (Joe Roscom)
Deploy west side (Fromin Chan)
Train accounting staff
Book Room and AV (Fromin Chan)
Schedule Staff (Sally Jones)
Train (Fromin Chan)
Click here to enter Terri's actual workgroup site...
Back
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FIGURE 3g